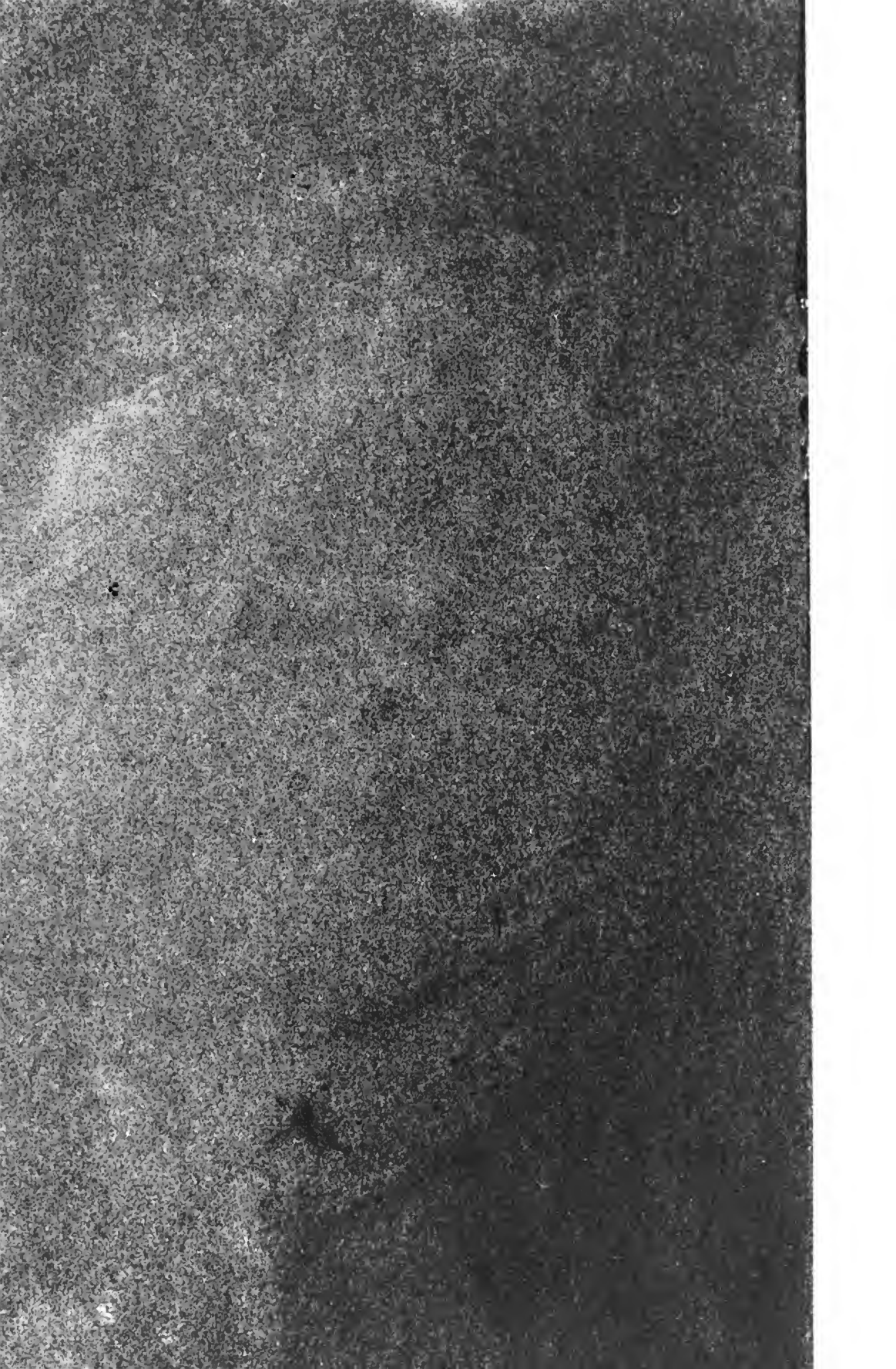
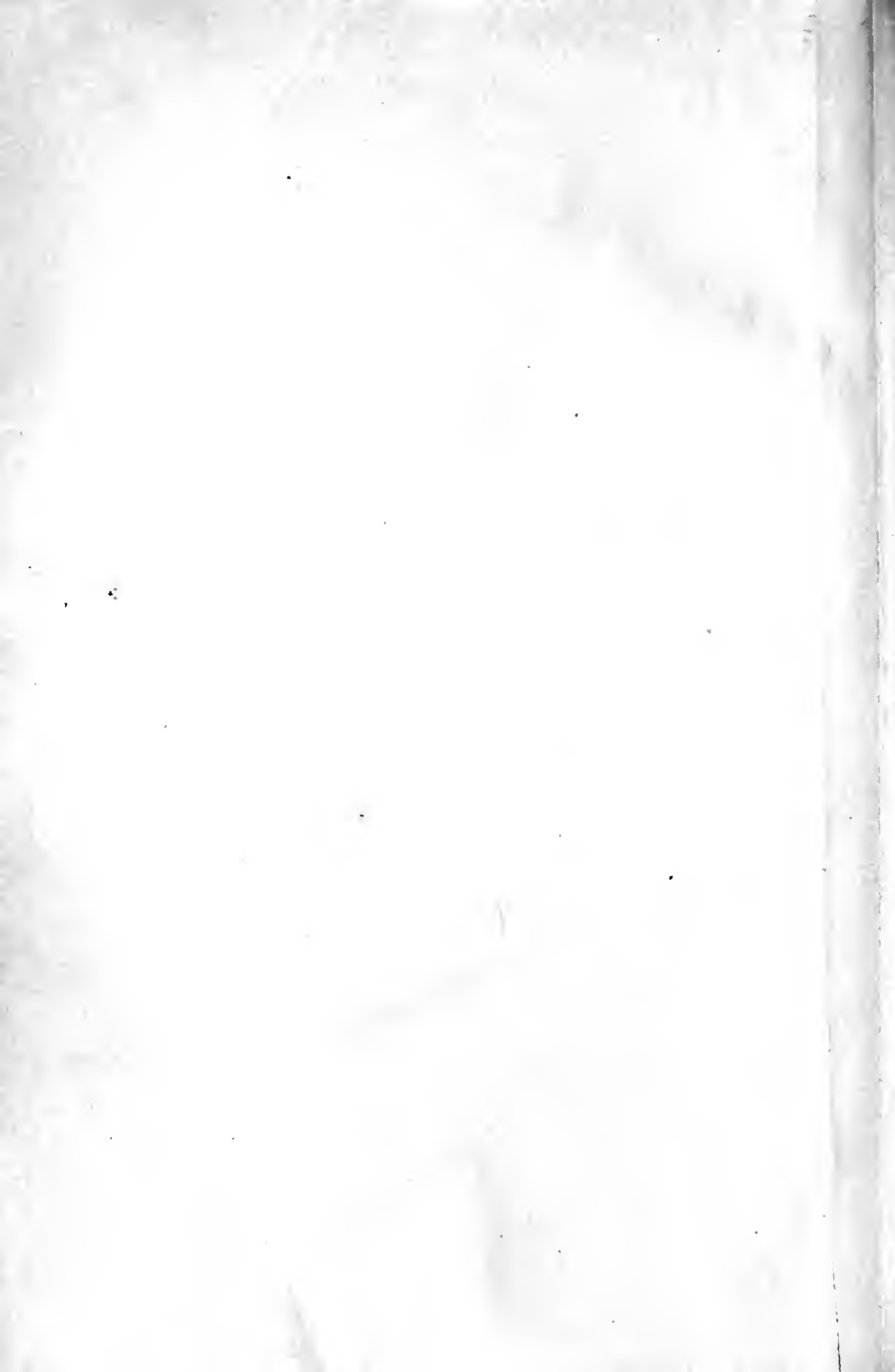




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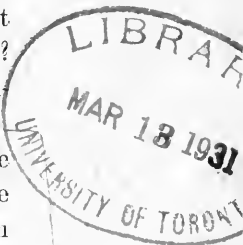
Oliver Goldsmith, M.D. (Oxon.), and His Medical Age

AN INTRODUCTION BY JOHN N. ELLIOTT BROWN, M.B.,
TORONTO

This "very great man"—to use the words of his great friend, Samuel Johnson, lived during the second and third quarters of the eighteenth century, 1728-1774. His was a very unusual career: Born in Ireland where he received his early and university training; taught in medicine at Edinburgh for two years; and in Leyden and Louvain for a term; impelled by fate to tramp as a mendicant for one year, through Flanders, France, Switzerland, Germany, Italy, and, probably, "Onward where the rude Corinthian boor against the houseless stranger shuts the door." Returning on foot to Britain, he reached Dover penniless; walked to London in ten days, where he tried twice to practise the profession he wished to practise, but failed; tried school-teaching, but failed; commenced authorship, and after fearful odds, attained a magnificent triumph in literature.

To account for Goldsmith's success is a challenge to the curious admirer of the product of his genius. Who were his forbears? What were the early experiences of the boy? Who were his teachers? What were his favorite studies? What books did he read? Why did he choose medicine for a calling? In short, what rôle did the age in which he lived, or any preceding age, play in influencing his steps?

In the preceding century there was a general belief that there was an elixir of life—also that the grosser metals could be transmuted into gold; also in magic; also in witchcraft and in astrology. It is estimated that forty thousand were condemned to death for witchcraft in this century under a law which was not repealed until Goldsmith was eight years old, 1836. Astrology



was taught at Oxford and Cambridge and recognized by parliament. Charles I had his horoscope cast, but failed to follow its forecast, lost his head and his kingdom. The shining example of sanity amid this dark background was the discovery of the circulation of the blood by Harvey.

The House of Hanover began its régime fourteen years before the birth of Goldsmith. The Stuarts had still many influential friends, the Jacobites, particularly north of the Tweed, and not a few south of that stream, including Goldsmith. Their intriguing culminated in the Rebellion of '45. They were defeated at Preston Pans. Surgeons from Aberdeen bearing arms, medical instruments and dressings took an active part in the clash.

Next came the war of the Austrian Succession, England taking the part of Maria Theresa. Frederick II of Prussia hesitated which side he would take. If he assisted Maria Theresa and they won, he might well be offered coveted Silesia as his prize; if he opposed and joined her enemies, France, Spain and Hungary, and invaded and conquered Silesia, that territory would represent his share of the spoil. He chose the second alternative. To help him win he sent for surgeons to Paris to establish a nursery for German surgeons in the Charity Hospital, Berlin—the Péninière it was called—where Dr. Hans might learn something about the latest treatments of wounds, fractures and other war disabilities.

A little later the Seven Years' War disturbed the serenity of the British. India and America were the distant storm centres. Clive immortalized himself in the heat of the East, while Wolfe, in 1759, covered himself with glory at Quebec, which victory Goldsmith commemorated in verse. It may be recalled that three nations had obtained foothold on the North American continent: the British held thirteen colonies on the Atlantic seaboard; the French held Canada, and coveted that wide strip of territory between the Alleghanies and the Mississippi; the Spanish that large section west of the Mississippi, with New Orleans and its environs. The treaty of Paris, in 1763, gave Britain the control of these French possessions in America, which she still holds; but not for long did she hold the colonies

along the Atlantic seaboard. The hardships of the Stamp Act, the tax on tea (and these without representation), led to their loss in 1776. Oliver was with the Colonists; his bosom friend Samuel Johnson, a good Tory, stood by the blind King George III and his short-sighted advisers.

Let other events, and conditions, the influence of which must have reacted on our hero, be alluded to as we proceed with his personal history.

The Goldsmiths migrated from England to Ireland during the sixteenth century. One, John, was a searcher for the port of Galway, and later clerk of the Council of Henry VIII. One married the daughter of Juan Romiero, a Spaniard, who after visiting Ireland made it his home. Wolfe, who fell on the Plains of Abraham, had a Goldsmith for a mother. The Goldsmiths were generous to a degree, simple, and improvident. Oliver possessed all of these qualities in excess. His father had taught him and his several brothers and sisters that *since Universal Benevolence had cemented society together they should consider all the wants of mankind as their own, and should regard the human face divine with esteem and affection*. "Our father," he wrote, "wound us up to be mere machines of pity, and so rendered us incapable of withstanding the lightest appeal made either by real or fictitious distress: he taught us the art of giving in thousands before we were taught the more necessary qualification of getting a farthing." Oliver's characteristic in these respects are almost perfectly portrayed in *Honeywood, The Good-Natured Man*.

The father was a village preacher and small farmer, passing rich on forty pounds a year. Oliver's first teacher, an old dame in the family, found him "impenetrably stupid." Then came old Paddy Byrne, the one-legged veteran of Queen Anne's and King William's wars, who "shouldered his crutch and shewed" the wondering boy "how fields were won." Also told hair-raising tales of witches, banshees, fairies and raparees; but these, though listened to with avidity and credulity, did not scare the boy. He appears to have been fearless.

The family moved from Pallasmore in Longford to Elphin and later to Ballymahon. Hence, Oliver had other teachers.

including his father, and went up to Trinity College, Dublin, apparently with a fairly good classical and literary training. It was his misfortune, perhaps, to be small in stature, awkward, hesitating in speech, ill at ease in company, very sensitive and shy; besides being badly pockmarked. Owing to poverty he accepted a sizarship at the University. He was not a brilliant student and, according to Dr. Wilson, showed no signs of genius. Rather was he a poor student; but it should be mentioned that he wrote ballads and sold them for a trifling amount. He disliked mathematics, the professor of which he hated. No wonder; for, winning an exhibition in some other subject, he gave a celebration party in his room in the attic. Wilder, breaking in on the party, knocked Oliver down by way of punishment. Oliver decamped. A good uncle interposing, he was induced to return and finish his course, graduating M.A. when he was twenty-one—1749. A pane of glass on which he had scratched his name is now a cherished possession in the University manuscript room; and Goldsmith's statue adorns the campus.

Oliver had now two years to wait before he could apply for admittance to the Church, into which his family wished him to enter, since the father's father and grandfather had all been clergymen of the Church of England. Modern teachers say that how one spends his leisure gives a clue to one's character. His mother had become a widow while Oliver was in Dublin, and was now struggling to support the family. Oliver knocked about Ballymahon, hunting weasels, examining birds and bugs and bees, picking up certain items of information which he afterward incorporated in his *History of Animated Nature*, though he acknowledges that he got most of his material from Buffon's great work. Here he met the Catholic parish priests of the locality and with them carried on his practice in French. He acquired considerable proficiency, which was a great help to him later in his walking tour through France. He likewise learned that since Catholic seminaries were banned in Ireland students for the Catholic Church went to French seminaries for their tuition. This knowledge was valuable to him as we shall see. It must be mentioned as well that he often visited The

Three Jolly Pigeons, where he took a prominent part in the convivialities of the inn.

During this two years of comparative freedom, Goldsmith thought of emigrating to America; got as far as Cork with money for his passage which had been advanced by his uncle Contarine, but he spent it in gambling. He did not go to America, claiming that the ship sailed unexpectedly and without his knowledge. He was obliged to return home, where he was welcomed and forgiven. Finally he appeared before the Bishop to be examined for the Church. It is probable that he had not the requisite theological knowledge. Besides, having a partiality for gaudy dress, he appeared before his examiner in scarlet breeches, which may have prejudiced his Lordship against him. He then started for London to study law; got as far as Dublin, spent his money in gambling and was obliged to return home.

Next medicine was suggested and decided upon. Uncle Contarine again advanced money. Oliver was well prepared. He had a good knowledge of the classics and of French; besides, we learn from his own pen, "The circle of the sciences I have run through before I undertook the study of physic have been not only useful, but absolutely necessary to the making of a skilful physician." His choice of Edinburgh could not have been excelled, for here he spent nearly two years under the great Munro Primus—the first and most successful professor of anatomy and surgery in the newly established University in that city.

Of this great teacher his famous pupil wrote: "Munro has brought the science he teaches us to as high a perfection as it is capable of. Not content with bare anatomy, he launches into all branches of physics, where all his remarks are new and useful. Doctors and students come from all parts of the world, even from Russia. He is not only a skilful physician, but an able orator, and delivers things in their nature obscure in so easy a manner that the most unlearned may understand them."

Munro was taught by Cheselden and Douglas in London; later under Albinus at Leyden. After his appointment in Edinburgh, then a town of some thirty thousand in a half-civilized politically perturbed country, he took a leading part in the

establishment of the Royal Infirmary, of which he was the first surgeon, one of the leading operators of the day. He published important papers on aneurism, cataract, hernia; and tried to cure hydrocele by injections of wine. Munro attended the P.M.'s of all his patients who died, and dictated to his students accurate notes of the cases. His first and best known work was on *Osteology*. Later followed a treatise on the Nerves, and his *Essays and Observations*. He laid great stress on Comparative Anatomy. In 1745 he hastened to Preston Pans to attend to the wounded loyalists and rebels.

His place was taken on his death by his son Munro Secundus—an able man, who had been a student with Goldsmith. He was with difficulty persuaded to give over his surgical lectures to a professor of surgery and be satisfied to teach anatomy only.

Munroe Tertius, as one so often sees, was an example of how some great families deteriorate. The drawback to the teaching of the time was the descriptive expository lecture, a habit to which the Munros were too prone, especially Tertius. Up to 1846 it was his custom after partaking of cranberry tarts at the small pastry-cook's in the midst of his grinning students, with digestion unimpaired, to spend the next hour reading to them, as part of his anatomical lecture, his renowned grandfather's essay on Hydrophobia.

The three Munros occupied the chair of Anatomy in Edinburgh for 126 years.

William Cullen, was appointed professor of chemistry in Edinburgh in 1756. The following year he commenced to give clinical lectures in medicine in the Infirmary with great success, continuing for eighteen years. His lectures were marked by simplicity, comprehensiveness and copiousness of illustration. He emphasized the importance of the use of one remedy at a time. He invited his students to his house and gave them very valuable advice. He stressed, like Osler, the importance of work. His *Nosology* and *First Lines of the Practice of Physic* were noteworthy in his day.

The notable work in chemistry of Dr. Joseph Black of Glasgow, a pupil of Cullen, must have been known to Oliver. Black was called over from Glasgow to Edinburgh just after

Goldsmith left to undertake research work in chemistry. Black's great discovery was that the causticity of alkalies is dependent upon their combining with carbonic acid, which Black called fixed air, since he discovered it in solid bodies. Until this time their causticity was supposed to be due to the absorption by the alkalies of a substance called phlogiston. This bit of research by Black is reputed to be the most beautiful example of inductive investigation since the *Optics* of Newton. His experiments on magnesia, quicklime and other alkalies revolutionized the study of chemistry. Later Black added to his laurels by discovering latent heat.

Aberdeen at this period was a fine cultural centre. It possessed a good medical faculty in its University. One of its foremost medical teachers and practitioners was John Gregory, who died in 1773, a year before Goldsmith was born. He was succeeded by his son James, who later came to Edinburgh University to be professor of medicine, in which position he distinguished himself. Other notables were Thomas Livingstone, and the two Skenes, Andrew and John. Another prominent Skene, Francis, a medical man, taught Civil and Natural History in Mareschal College. Besides these were Gordon, Rose and Donaldson, well known in Scotland as medical pioneers in the North.

In an old medical account one notes charge-items for vomits, bleedings and for shot-gun prescriptions—typical of the period throughout Britain. Among the remedies used were vipers' broth, crabs' eyes, blue-bottles, hogs' lice, snail, skulls, and moss from skulls. Tincture from skulls was a favorite remedy for epilepsy. Goats' and asses' milk was given for gout and consumption. Charms were in common use among the uneducated—used in minor ailments like toothache. The patient was expected to repeat over and over some biblical phrase.

Medicines were in general sent up from London; and for the supplying of these the patients were charged. Indeed the charges were placed high since the old Scotch folk, while willing to pay for the drugs, demurred at paying for the visits, pawkily informing their physician they would return his calls.

At this period quackery was rampant. One, Dr. Graham of Edinburgh, an irregular, was very popular among the fashionable folk. This was a sample of his advice written for one who consulted him: "I eat and drink what I like and am never sorry: I am about your age." He established a Temple of Healing in the Scotch capital where he gave earth baths. He succeeded so well that he removed to London where he erected another Temple; but ere long he became insane and died in an asylum.

These northern doctors were hardy in body and strong in mind, accustomed to hardships like our Canadian country doctors of the recent past; they were shrewd and intelligent—men of importance and leaders in their respective communities. As an example of their way of life let me cite the routine of Dr. Goodsir. It took him a week to visit his patients. He made rounds on horseback up the glens and over the moors. Wearing a cocked hat, rough overcoat and great top-boots his picturesque arrival at the settlements was one of the events of the week—like that of postie.

The clergy and lairds grew medical herbs in their gardens from which they prepared infusions and other forms of medications for the treatment of simple ailments among their parishioners and servants, respectively. Besides nearly every community had its "skeely" woman or its wizard-ignoramuses who undertook to cure disease by witchcraft. Bleeding was in vogue for every conceivable disease, performed generally by a barber instead of by a physician.

The Aberdeen Journal, in order to exalt its Infirmary and one of its surgeons, Thomas Livingstone, announced in a news item that so-and-so had been cut for stone by the said Livingstone and was making a good recovery, concluding by suggesting that sufferers would be welcome to come to the Infirmary for treatment by this skilful surgeon.

Walter Scott describes the fashionable doctor's dress of the period: "He loved display; wore a wig, a sword, and a scarlet coat. His wife ranked with that of the noble's wife. In London he rode in a chariot or on horseback with a foot cloth, followed by a manservant." The court physician carried the gold-

headed cane, so well known to us. A small excavation in the handle held the "Vick" of that day.

Most of these Northern doctors were Jacobites. The Lairds and their surgeons followed Prince Charlie. Cruikshanks joined the rebels at Edinburgh, also Ross, Meldrum and Cameron—Lochiel's brother—the last named being captured at Inverness and shot.

My belief is that while at Edinburgh Goldsmith contracted the disease, the sequels and complications of which rendered him more or less a semi-invalid during the remainder of his life.

PHILOSOPHY

In 1748, when Goldsmith was twenty years of age, Hume the Scotchman came out with his essay on the "Human Understanding." He seemed to be disgusted with the old metaphysics—the alleged science of the essence of things. "That abstruse philosophy and metaphysical jargon which being mixed up with popular superstition renders it impenetrable to careless reasoners and gives it the air of science and wisdom." There were the two classes of philosophy, the idealistic and the materialistic; the first holding "there are no bodies"; the second holding, "there is no spiritual substance." Hume shrewdly inquired, "Can the human mind solve the problem of the essence of being?" and he set to work analyzing the faculties and capacity of the mind as to its ability for coming to a conclusion on such remote and abstruse subjects as traditional metaphysics busied itself with.

Tiring of Edinburgh, Goldsmith decided to continue his studies in Paris under Ronelle. He set sail from Leith; but the vessel, he relates, was driven by a storm into the port of Newcastle. While here he was arrested with the Scotch crew for suspected complicity with the French. Before he was able to prove his innocence the boat set sail for Boulogne, encountered another storm and foundered with all on board. Thereat our medical student took a boat to Rotterdam, thence to Leyden, where he spent two terms under the great Albinus, and Gaubius.

It may be of interest to relate that Aikenside was a Newcastle boy, trained also at Edinburgh and Leyden, graduating in 1744, practised successfully in London where his society

was courted for his taste, knowledge and eloquence. He published several treatises on medicine; but is chiefly known through his long poem, "Pleasure of the Imagination." It is said of him rather disparagingly that "his solemn sententious manner, romantic ideas of liberty and unbounded admiration of the ancients, exposed him to ridicule." Smollett caricatured him in *Peregrine Pickle*.

Albinus was the son of a doctor; was well trained in medicine, classics and philosophy under his father, Bidloo, Decker and Boerhaave at Leyden. He continued at Paris under Senac and Winslow. Received his M.D. without examination—as did Goldsmith probably—and succeeded his father in anatomy in his Alma Mater. His inaugural address, entitled *De Vera Via Fabricae Humani Corporis Cognitionem Ducente*, "The true way leading to a knowledge of the human body," stressed the importance of the study of comparative anatomy. Later he published his well-known work on bones with true and very well executed plates—the best ever executed. Next came 1. A dissertation on the intestinal arteries and veins with a plate showing the anastomoses of the arteries; 2. The Color of the Ethiopian; 3. *Icones Ossium Foetus Humani* with a brief history of the growth of bone; 4. A description of the Anatomical Plates; 5. The Plates of Eustachius with explanations; 6. Tables of the skeleton and muscles in large folio in London; 7. *Annotationes Academicæ* in 1760 (four volumes). He also edited the works of Harvey, Vesalius, and Fabricius de Aquapendente. His work on the muscles was of outstanding merit.

Albinus was the leading anatomist of his time; held the chair of Anatomy in Leyden fifty years; died in 1770 at the age of seventy-three. "Supporting the mechanical theory of Boerhaave he paid great attention to the intimate structure and relations of the several parts of the body; and his illustrations were beyond praise, though he never sacrificed truth to beauty."

Gaubius, 1705-1780; too, was a student of Boerhaave, Professor of Medicine in Leyden, where he took his degree. His inaugural dissertation was entitled "On the Solid Parts of the Human Body," 1725. He put out a little volume, *Concerning Methods of Making Medical Formularies. The Influ-*

ence of the Body on the Mind followed. A more pretentious work was his *Institutionales Pathologicae Medicinalia* (1758), translated by Sue, the first complete work published in Pathology. Gaubius belonged to the dynamic school of his teacher. "He admitted among the defects of 'fibre' only tension and feebleness, not laxity. He believed that we are possessed with an independent vital force, seated in the solid parts alone, the prerogatives of which are energy and receptivity, which defects might increase into irritability or sink into torpor. To irritability he assigned sensation and motion—both the results of irritation. Gaubius admitted possible defects in fluids also, and concedes they might conceal a vital force."

Gaubius' Pathology was studied closely by medical Europe. He was as much interested in the signs of health as in those of disease. Hence if alive to-day he would be a strong advocate of periodical examinations. He looked on disease as a material entity; considering each separate malady as having a predisposing state, which he called the morbid seed. He taught that fever was caused by increased capillary circulation, probably due to increased friction and influenced through the nervous system.

Brief allusion may be made to Boerhaave and Ruysch, who were contemporaries of Goldsmith—the former for ten years and the latter for three. When Oliver reached Leyden in 1754 Boerhaave's name and work were in the ascendant. His great conception was that of medical affinity; his careful and extensive post-mortem work and his mechanistic doctrine stand out pre-eminently. Ruysch, a pupil of Sylvius, made important studies while a student on lymphatic valves; but his chief monument was the series of wax injections he made of all parts of the body which enabled students to learn something of minute structures. Ruysch collected much material for the establishment of a museum and published a number of copper engraved atlases. Skeletons were set up in quaint postures and marked with such legends as *Nascentes Morimur*. His specimens were of bone inflammations, tumors, calculi, scirrhus of the liver, papillary tumor of the bladder.

Peter Camper (1722-1789), was a native of Leyden; a teacher *par excellence* of anatomy and surgery in Amsterdam,

on which subject and on pathology and medical jurisprudence he wrote much. He also wrote treatises on calculi, fractures of the patella and olecranon. His drawings of herniæ were specially noteworthy.

En passant it may be interesting to note that pathology was even popular among the society folk, since the burghers and their matrons would turn out *en masse* to see post-mortem examinations. Pity the populace nowadays were not equally interested; for then we would have little difficulty in securing subjects in our hospitals for post-mortem examinations.

In England, at Court, William Harvey had dissected the remains of his noble patients. His contention was "That the examination of a single body of one who has died from some disease of long standing is of more service to medicine than the dissection of the bodies of ten men who have been hanged."

Contrasting Edinburgh with Leyden, Goldsmith says: "Among the Universities abroad I have ever observed their riches and their learning in reciprocal proportion, their stupidity and their pride increasing with the opulence. Happening once in conversation with Gaubius of Leyden to mention the colleges of Edinburgh, he began by complaining that all the English students which formerly came to his University now went entirely to Edinburgh; and the fact surprised him the more, as Leyden was now as well as ever furnished with masters excellent in their respective profession. He concluded by asking if the professors of Edinburgh were rich? I replied that the salary of a professor there seldom amounted to more than thirty pounds a year. 'Poor men,' says he, 'I heartily wish they were better provided for; for until they become rich we can have no expectation of English students at Leyden.'"

Goldsmith left Leyden on foot with a guinea, which he had borrowed, a shirt and a flute. His final objective was Padua, where the great Morgagni reigned supreme in the Italian medical world. It took Goldsmith ten months to reach his goal. Before starting he noticed some rare tulip bulbs in a shop, and recalling his good uncle Contarine's love of flowers, bought a supply of the bulbs and forwarded them to him.

Students who have studied Goldsmith closely ask themselves why he did not keep a journal or a diary or write the story of his wonderful tramp; like Bayard Taylor did in his *Views Afoot*; or R. L. Stevenson in his *Through the Cevennes with a Donkey*; or as Gray did (a few years before Goldsmith) of his journey with Walpole through France to Italy, which he described in his works; or as Sterne did, incorporating the same in the romantic *Sentimental Journey*, or Belloc in his *Paths to Rome*.

Though Goldsmith did not give us a day-to-day account of this most interesting experience—a walk through Flanders, Switzerland, Germany, Italy, yet we glean a good deal about his reactions to the experience in his *Enquiry into the State of Polite Learning in Europe*; in the sayings of some of his characters in the *Vicar of Wakefield*; in his *Citizen of the World*; and lastly in that literary pearl, *The Traveller*, or *A Prospect of Society*.

Goldsmith went first to Louvain; then to Antwerp and on to Rouen; then along the Seine to Paris. Here is his schedule.

Place	1755	Approximate Dates
Leyden; departed—	February, 1755—	date uncertain.
Paris; arrived—	March 1st.	
Paris; departed—	April 14th.	
Strasburg—	April 28th.	
En Bade—	May.	
Scaffhausen and Basle—	May 28th to June 7th.	
Berne—	June 10th.	
Geneva; arrived—	June 15th.	
Geneva; departed—	August 1st.	
Florence—	August 28th.	
Milan—	September 5th.	
Venice—	September 10th.	
Padua; arrived—	October 7th.	
Padua; departed—	December 7th.	
Dover, England—	February 1st, 1756.	

The great man in Paris at this time was Senac (1693-1770). He was Louis XV's physician. His best work, perhaps, was that on disorders of the heart and blood vessels. His article on

the heart's action and structure (1740); on aneurysm-dilatation, which he spoke of as its commonest ailment, but which he did not distinguish from hypertrophy. His description of pericarditis was well done; he noted hydrothorax as a sign of failing circulation, and looked upon what had formerly been called poly of the heart as an ante-mortem clot. He recognized the absorption of pus from a purulent focus, as a cause of fever—the germ of the septicaemic concept.

Lieutaud (1703-1780), of Montpellier, came to the court of Versailles on invitation of Senae; attended both Louis XIV and XV; a fine anatomist—normal and morbid. His dissection is included in the *Historia Anatomica* (1767), which work represents the work of three centuries of anatomical observations—the last of many books of the sort. Lieutaud arranged in parallel columns symptoms side by side with what was considered the corresponding pathological condition; as *Apoplexia*, *Aqua in Cerebro*. A tremendous bit of work, but of little practical value; out-of-date, the historians tell us, before it was off the press.

Angelique Marguerite du Coudray (1712-1789), was a noted Parisian midwife and the author of a work on obstetrics which passed through six editions. She founded many maternity hospitals throughout France, and gave a course of lectures on the art at Rochfort to the doctors in the Naval School.

Muralt, who was trained at Leyden, Basle, Oxford, and Paris, gave lectures in anatomy during the sixth decade of the eighteenth century, demonstrating on the bodies of dead criminals and patients dying in hospitals of remarkable diseases. A *rare mecum* on anatomy may still be found by the curious medical book hunter.

When Goldsmith visited Paris in March, 1755, Astruc had but eleven years to live. He was the great authority on lues, about which he wrote (1750) in his historical *Tractus Pathologicus*. He wrote also on diseases of women; and on tumors, differentiating them from cysts, which he thought were dilated lymphatics. Schirrus, in his opinion, was a lymphatic development, and cancer an outgrowth from it, produced through the thickening of the humor. Syphilis he traced to America, and showed that it was contagious. He described the hard sore

accurately and the second stage exhaustively; he recognized involvement of the testes and of bone, but involvement of the liver and of aorta escaped his sharp eyes. Astruc's work was one of four medical authors' books found in Goldsmith's library at its sale.

Croissant (1688-1759), was one of the best anatomists and surgeons of his time, he wrote *Traité des Operations de Chirurgie*. He devoted special attention to operations for nasal polypi, harelip and strangulated hernia.

THERAPEUTICS

Antoine Baumé invented the hydrometer which bears his name. He was an apprentice of Claude Joseph Geofroy. At the age of twenty-five he was appointed professor in chemistry in the college of France, founded a factory for the making of sal-ammoniac, and devised a process for bleaching silk. His best work was done in connection with dispelling the traditional superstitions of pharmacy with regard to the polypharmaceutical preparations which contained such a combination of disgusting ingredients. His *Elements de Pharmacie Theoretique et Pratique* is a classic, and went through many English as well as French editions. He was an authority on perfumes, liquors and the manufacture of ether, and helped to revise the nomenclature of chemical compounds.

When Goldsmith left Edinburgh his purpose was to visit Paris and study chemistry under Rouelle. We have noted why his programme was changed. In a letter to his uncle before leaving Leyden he stated that he wished to study under Farhein, Petit, Du Hammel de Moneeau. Rouelle taught chemistry at the Jardin des Plantes in Paris, and it is noteworthy that he was the teacher of Lavoisier. The contribution that he made to chemistry was the classification of chemical salts into acid, basic and neutral. He also recovered magnesium and sodium from their compounds. It is possible that Goldsmith took lectures at the same institution from Macquer (1718-1784), Master of Pharmacy and Professor of Medicine and of Chemistry in the same institution, who wrote a dictionary of chemistry and was director of the porcelain factory at Sèvres.

Petit, another great surgeon, was the inventor of the screw tourniquet, gave the first account of softening of the bones and of the formation of clots in wounded arteries; and was the first to open the mastoid process. His *Traité de mal* was published after his death.

VOLTAIRE

In one of his essays Goldsmith states that he had the honor of meeting Voltaire in Paris. This is disputed because Voltaire was absent from Paris after 1750 until his death. Forster, one of Goldsmith's biographers, says the meeting took place at Les Delicées, Geneva, where Voltaire was then living. Perhaps. Prior, another biographer of Goldsmith, claims that Voltaire did stay a short time in Paris during the period above mentioned, after his visit with Frederick the Second at Potsdam. Voltaire was a strong opponent of Christianity, and an enthusiastic advocate of democracy. He held that "the object of history was not to inform the world in what year a prince who did not deserve to be remembered succeeded another barbarian like himself in the midst of a rude and gross nation; but, rather, to seek out amidst the recorded events that are deserving to be known by us, the spirit, manners and usages of the principal nations. He looked to literary culture as a great means of human progress. Voltaire regarded the history of the first ten centuries of our era as no more worthy to be remembered than the history of wolves and bears. Henry Ford goes further when he claims that all history is bunk. Feudalism of the Middle Ages filled Voltaire with disgust. It was only in the Renaissance, with its revival of learning and tolerance of theological differences and its love of polish, that he seems to find anything worth writing about."

HALLER (1708-1777)

On the 10th of June the weary Goldsmith, who had been tramping for several months, arrived at Berne. For two years the celebrated Albert de Haller had been living here, his early home, in semi-retirement, having already had a distinguished career. He had been a most brilliant boy. At the age of four,

in his father's patrician home, he gave religious exhortations to the servants. At nine he composed a Chaldaic grammar for his own use, a Hebrew and Greek lexicon and a historical dictionary. He attended the University of Tübingen; then proceeded to Leyden and studied under Boerhaave along with Albinus, graduating in 1727. His thesis exposed the mistake of Coschwitz, of Halle, who claimed he had discovered a new duct of the submaxillary and sub-lingual gland. He then travelled through Belgium, England and France. In London he became intimate with Hans Sloane, Cheselden and the two Douglasses. Through the influence of Sloane presumably, George II created for Haller at Göttingen in 1736 a chair of Anatomy, Botany and Medicine, which he brilliantly filled for seventeen years, during which time he did the most important work in experimental physiology which had ever been done. His book, *The Elements of Physiology*, published in 1757, two years after Goldsmith's visit, marked the division between the old theoretical and the new experimental physiology. He was likewise famous in mathematics and botany, continuing his botanical studies all his life. He refused offers of professorial positions in Oxford and Berlin. Haller was strongly religious and socially minded; he established a church in Göttingen, and a botanical garden. His outstanding work in physiology had to do with the growth of bone, the development of the embryo, the mechanics of respiration and the irritability of muscle.

ON TO GERMANY

Let us speak for a moment or two about three German military surgeons of great repute at the time of Goldsmith's visit to Strasburg, Tübingen, Freiburg and Baden. Their names are Schmucker, Bilguer and Theden. Schmucker (1712-1786) studied under LeDran and became surgeon-general of the army. He published the results of his experiences in his *Chirurgische Wahrnehmungen*—Surgical Observations—in 1774, and some miscellaneous notes on surgery between 1776-1782. These were contributions relating to wounds of the head, trephining, and on amputations.

Bilguer (1720-1796) studied in Strasburg and Paris; entered the army in 1740, rose to Second Surgeon General in

1757. In 1761 he published his *Membrorum Amputatione Rarissime Administradi*, in which work he opposed the excessive tendency to perform amputations which was so characteristic of the period, and rather encouraged by Schmucker.

Theden (1714-1797) was educated as a Barber-Surgeon; entered the army in 1733 as Third Surgeon General; was promoted later to Second, and later still to First.

AUSTRIA

Leopold Auenbrugger (1722-1809) was appointed Physician in Chief to the Hospital of the Holy Trinity in 1751; and there he tested and tried out his discovery of Percussion, based upon observation, and by post-mortem examination. He noted the higher pitch of the percussed note in consolidation of the lung and over fluid. He injected fluids into the cadaver to procure an artificial condition comparable with what one finds in life. He localized pectoral fremitus. Like many other discoverers he was laughed at, and his discoveries made little of by his cœvals; some damned it with faint praise. Haller, Ludwig and Stoll, who followed Sydenham in his idea of the "genius epeidemicus," wrote on medical ethics, and helped to bring the old Vienna school to a new plane—all stood by Auenbrugger. Oddly, his work on percussion remained unnoticed after his death, and until the time of Corvisart who, in 1808, made a second translation of his book, and called attention to the importance of this wonderful, though simple, clinical procedure. (A first translation made some years before had not been noted.) Corvisart calls it "a beautiful invention which of right belongs to Auenbrugger, but that I wish to call to life."

Auenbrugger loved science for its own sake; was modest, genial and honest, home-loving and fond of music. He wrote the libretto of a little opera prepared for the special gratification of Maria Theresa.

To return to our pedestrian medical student: After visiting Germany Goldsmith retraced his steps through Switzerland, crossing the Alps into Italy, visiting Milan and Florence, and finally arrived at Padua.

Through Flanders and France he played his flute before the doors of the cottagers at nightfall with the hope of securing supper, bed and breakfast. He was always welcome at the Seminaries, where his compatriots, the Irish Catholic priests, were students—welcome to a cup of “tay” without pay; they never turned the “kay” against him. How they must have enjoyed the relating of his adventures! In Italy and Germany his simple Irish music was not relished by the peasantry. He, thereupon, took advantage of a custom rife in the Universities, of allowing any traveller to enter into learned disputations with one of their number on some philosophic, historical, theological or literary subject; and if the stranger excelled his opponent, free entertainment was awarded him. One may learn of some of the things discussed and what Goldsmith said in his *Citizen of the World*, in his *Enquiry into the State of Polite Learning in Europe*, and from some of the speeches of Dr. Primrose, in *The Vicar of Wakefield*.

When Goldsmith reached the University of Padua, the wonderful Morgagni (1682-1771) was lecturing there in anatomy. He had been a pupil of Valsalva, and a graduate of Bologna. Goldsmith doubtless knew of his recent work. We dare say Oliver sat under this great teacher of anatomy, and author of *De Sedibus et Causis Morborum*. Publication of *Adversaria Anatomica* led to his call from Padua, where he remained half a century. A great executive and an extraordinarily popular teacher, outstanding consultant and friend of the leading people of the city and state, he received scientific honors from all Europe. *Seats and Causes of Disease* was published in 1761 (three years after Gaubius' great book on general pathology), after sixty years of observation and reflection, when its author was seventy-nine. It went through several editions before he died in his ninetieth year. He had the good habit of correlating clinical symptoms with organic change. Prior to this the standard printed work on the subject was the *Sepulchretum* of Bonet, which contained hundreds of accounts of post-mortem work only. Morgagni's great work was written in the form of letters to a friend, until he had written seventy. The correspondent returned them, and Morgagni compiled the letters into five books. His work ren-

dered all previous works obsolescent. His fascinating literary style must have appealed to Goldsmith. In his case records we find such expressions as, "a certain honest citizen," "a good and pious virgin," "a most powerful monarch," "a woman of Padua, by name of Jacoba, the wife of Angelo Zanardi; finding thirteen ribs on each side of her body, I enquired her name, noted it, something I am accustomed to do," shows his patriotic point of view. His histories and post-mortem reports were full. His plan consisted in taking parts of the body and referable symptoms. Renal symptoms and gastric in the same patient split the single case reported by a hundred pages. Search for tumor pathology led one into every section of the book, as French's earlier editions do to-day. This was the fault of his book. His special work was on the vascular system.

Morgagni's interest in apoplexy must have been stimulated through knowledge of the death of both Valsava and Malpighi, and his great friend, Ramazzini, from stroke. While admitting the role of small aneurysms in its causation, he was inclined to attribute an important part to the choroid plexus in hemorrhage into the ventricles of the brain. He retained the two ancient divisions: serous and sanguinous. Descriptions of the former probably include infarcts, meningitis and uraemia. He did special work on aneurysm, noted its relation to lues and its frequency in guides, postillions and others continually on horseback. He observed in post-mortems, in lobar pneumonia, that the lungs presented a substance like liver, hence the term hepatization thereafter came into use. Hardly a phase of gross anatomy remained untouched by this great worker. Morgagni grasped the idea of contagion; for he was careful in his work, refraining from opening the thorax of a woolcomber, whose symptoms seem to have been those of pulmonary anthrax. He insisted that the bodies of certain prostitutes lie for a certain length of time before dissection; and, like Valsava, he avoided corpses of consumptives. He did, however, occasionally open them unwittingly. He describes excellently cancers of the stomach, rectum and pancreas. He had no idea of metastasis. He noted typhoid ulcers and enlargement of the spleen in enteric fever. He went into detail, and was very thorough. He did

not revolutionize pathology, as did Bichat and Virchow, but improved existing knowledge.

Morgagni's most distinguished pupil was Scarpa, 1747-1832.

Spallanzani (1729-1799) was professor of physiology at Reggio. The following discoveries are to his credit:

1. The digestive power of saliva.
2. The solvent powers of the gastric juice outside the body.
3. The regenerating power of the spinal cord, which he observed in a lizard he beheaded.
4. That the sexual posture of a frog was retained as a spinal reflex, even after decapitation, and after section of both brachial nerves, fore and aft.
5. That hibernating animals can live comfortably for a time in carbonic acid gas, where ordinary warm-blooded animals would die, and that cold-blooded animals can live in hydrogen, and give off carbonic acid gas.

That living tissues excised from a freshly-killed animal take up oxygen, and give CO^2 in an atmosphere of air or hydrogen, or nitrogen. He noticed that bats are but slightly dependent on vision; and that their well-known deficiency in visual purple may be due to disuse. Spallanzani was a pioneer in experimental morphology.

Goldsmith claimed that he secured a diploma in medicine from Padua. Dr. Crawford, of London, and Morris, of Johns Hopkins, contend that he never graduated in medicine from any medical school. Sir Ernest Clarke, of the London judiciary, disputes these contentions, having arrived at his conclusion after a study of certain personal memoranda handed him some years ago by a descendant of Bishop Percy, of Dromore, the author of *The Reliques of Ancient Poetry*. Percy and Goldsmith were intimate friends during the last several years of Goldsmith's life. He and Samuel Johnson accompanied Goldsmith, in 1769, to Oxford, where Goldsmith was granted an M.D. *ad eundem gradum*. It appears there has been no record found in the university archives of this degree being granted to Oliver, but the late Sir William Osler set one of his sleuths to make a search of the newspapers of the period, and he found a news item reporting that such a degree was granted. The article

stated that the degree had been granted because of the merit of Goldsmith's contributions to literature, and because he was a graduate, in medicine, of Trinity College, Dublin. Sir Ernest believes the Trinity degree was granted *in absentia* at the time Goldsmith applied for a medical appointment on the Coromandel Coast.

Shortly after Goldsmith arrived in London he obtained work with a chemist. An old friend assisted him financially, and advised him to commence practice. This he did at Bankside, near the old Globe theatre—a district notorious for its rude pleasure resorts, where bear-baiting, cock-fighting, gambling and roystering flourished. It was a case of a poor surgeon among poor patients. Goldsmith writes: "I grew tired and impatient with the duties and restraints of professional practice, chiefly among friends, and often insufficient for maintenance, and became disgusted with sick-chambers and capricious patients." He then engaged as an usher in a school conducted by Milner, father of an old Edinburgh fellow-student. But this work was likewise distasteful. Milner introduced him to Griffith, a publisher, with whom he lived, and did literary hack work for a pittance. This work, too, he disliked; for he had to write articles on uncongenial subjects set by Griffith and his ignorant wife, to suit their caprice.

Medicine again held out her hand; a medical officer was needed on the Coromandel Coast; Goldsmith applied for the position. But he needed one hundred and thirty pounds with which to procure his outfit. To secure this amount he agreed to write the *Enquiry into the State of Polite Learning in Europe*. But something intervened, and Goldsmith did not get the appointment. Back he went to his pen. But not long after he learned of a position of hospital surgeon's mate. To secure this an examination before a body of surgeons was required, and also some money for equipment. To raise the money he agreed to write the *Life of Voltaire*, for which he was to receive twenty pounds. But the candidate failed to pass.

Once again, after he had made a beginning success in literature, he was induced by Sir Joshua Reynolds to try private practice in a better part of London than Bankside. One of his early patients, a Mrs. Sidebottom, a friend, who, being warned by the

apothecary that there was something wrong about the remedy, returned to remonstrate with the doctor. He held his ground, but she took the advice of the apothecary and did not take the medicine. He concluded that he would not prescribe for his friends again; on hearing which decision one of the members of his club, Beauclerk, remarked that he had decided wisely—that he should only prescribe for his enemies. Making a second failure at practice, Goldsmith gave up medicine completely, and turned author, becoming the greatest genius of his age, according to Sir Walter Scott.

Let us now inquire into matters medical in Britain.

The humoral theory had long held sway, having evolved from an examination of blood effused after venesection. The clot represented the blood and the black bile; the serum was known as yellow bile and the buffer coat as phlegma. The amounts and characters of these four humors led to the terms descriptive of the temperaments—the sanguine, the melancholic, the bilious, and the phlegmatic.

In 1776 Borden called attention to the possibility that the human glands and organs secrete something specific into the blood stream, which was needed in the carrying on of the various bodily processes.

Pringle in 1752, in his work entitled *Observation on Disease in the Army*, held that a putrid ferment caused dysentery, but advised the suspension of all hypotheses for further inquiry in view of the doctrine promulgated by Linnæus, the Swedish investigator, who in his *Genera Morborum* gave some notion of the parasitic origin of disease, as he did of water-borne malaria fever. In passing let it be said that Linnæus gave a good description of embolism, hemicrania and aphasia.

Mead in his *Short Discourse Concerning Pestilential Contagion, and the Methods to be Used to Prevent It*, recommended quarantines and suppression of the infection. Infected people, he urged, ought to carry long colored sticks or other visible token, so that other persons would not come near them.

There were not a few adherents of the Brunonian theory:—living tissues were regarded as excitable; life was the result of the action of stimuli upon organized body. Diseases were either

sthenic or asthenic, according as the vital excitement was increased or diminished. Hence the treatment was either stimulating or depressing, calling for the administration of opium or alcohol respectively. The author of the theory tried both on himself; and they killed him.

PATHOLOGY

In London in Goldsmith's time it was precariously difficult to secure bodies for dissection. Even the granting to the surgical companies and the colleges the bodies of criminals had caused rioting. A Bristol surgeon who had exhumed a body in 1750, and was having it carried on a pack horse, had the misfortune to have it slip off, horrifying the night-watchman. Remounting it his office was reached, but a maid who discovered it on a table made such an outcry as to attract the attention of the neighbors, who made such a clamor that the surgeon had again to inhumate the body.

By an act of 1752, however, bodies of murderers were granted to surgeons, and an occasional cadaver from a hospital if not claimed by friends. But these sources were quite inadequate. Hence the appearance of the resurrectionists. Some of the snatchers received as high as twelve pounds per subject. The business was so paying that certain ghouls in Edinburgh began to murder people to secure material. One of them had fifty-three murders to his credit in one year in Auld Reekie.

SURGERY

John Hunter was a crude specimen of a boy who wasted his time around Glasgow until his late teens, when he decided to go to London and study medicine with his celebrated brother, William Hunter. He rode all the way on horseback. After entering the study he seemed consumed with a passion to learn anatomy and surgery. It is one of the romances of medicine to read of his progress from his advent to the metropolis as an uneducated, ill-mannered Scot, to the time when he became the greatest surgeon in London, in Great Britain, and we might add in the world. His contributions to physiology, pathology, embryology were extensive. He was a master in comparative anatomy. He collected and experimented upon plants and ani-

mals. He taught medical students; operated in one leading hospital in London after another, and gained an immense practice. He made an astounding collection of specimens. One is filled with amazement as he reads it all. That he should experiment on himself with the object of studying one of the vilest diseases with which mankind is afflicted and should write some twenty pages of manuscript descriptive of the signs and symptoms is an indication of his passion for experimental work. His motto was, "Do not think; try." His death was from angina pectoris, following a heated altercation. Both Hunter and Goldsmith sat for their portraits by Reynolds.

William Bromfield (1712-1792) was surgeon to the King and to St. George's Hospital. He wrote a two-volumed work in 1773 entitled *Chirurgical Observations and Cases*. It contained improvements in surgical methods, particularly in bilateral lithotomy. He recommended compression of the Subclavian artery above the clavicle on the first rib. He also pointed out how to ligate this artery in amputations by using a tenaculum to draw up the vessel so that the nerve and other tissue would not be included in the flat ligature he used. He was a cool operator; in one case of lithotomy where the intestines had protruded into the bladder he extracted three stones and returned the intestines into the abdominal cavity. A perfect cure followed.

Percival Pott (1713-1789) was surgeon at St. Bartholomew's Hospital for a number of years, commencing duty 1745. He has given us a most accurate description of the fracture which bears his name, probably due to the fact that he was a sufferer from that sort of fracture. He made contributions on hernia, injuries to the head, hydrocele, and on nerve lesions due to Pott's disease of the spine, which appear in his work on *Surgery*, which appeared in 1771, and which went through four editions.

Stephen Hales, who died in 1761, made an important contribution to physiology in his statistical essays. In the second part of this work—on haemodynamics—he describes his experiments on the mechanical relations of blood pressure. By fastening a long glass tube inside a horse's artery he devised the first manometer. With this he was able to make quantitative esti-

mates of the blood pressure, the capacity of the heart and the velocity of the blood current. Hale was the first person to introduce artificial ventilation.

In 1762 sanitary improvements in the city proper (London) spread to Westminster, due, as Herbeen wrote in 1808, not so much to any accidental absence of exciting cause as to our change in manners, love of cleanliness, and ventilation.

Medical societies multiplied during this period. One of the most noted was that started by John Coakley Lettson and his friends—the Medical Society of London, 1773. It comprised at first thirty physicians, thirty surgeons and thirty apothecaries. Later the society amalgamated with the Windmill Street School. By 1834 it had a thousand members.

Bishop Berkeley wrote a book entitled *Siris; or the Medical Virtues of Tar-Water*. He maintained that the resin of tar was analogous to the creative spirit in nature. In 1752 he wrote another book on the same subject. He described very minutely how the remedy was to be prepared. Concentrated solutions were manufactured for travellers. It was to be drunk warm for such diseases as ague, smallpox, measles and fever, colic, disordered bowels, gout and rheumatism. For other ailments it might be taken either hot or cold. Fever patients could not commence it too soon or drink it too freely. He reports the case of an old woman suffering from ague, colic and jaundice, who was cured after drinking three pints daily for three weeks (which sounds like a modern patent advertisement). Berkeley showed faith in his remedy by taking it himself when his health was failing, but without apparent avail.

John Wesley (1703-1781), considered by Augustine Birrell as the greatest Englishman of his times, wrote a book on *Family Medicine*, and prescribed some of the simpler remedies for any of his flock who needed his help. One may gather what he thought of the medical profession from this entry in his journal:

“Reflecting on the case of a poor woman, I could not but remark the inexcusable negligence in most physicians in cases of this nature. They prescribe drug after drug, without knowing a jot of the matter concerning the root of the disorder. And,

without knowing this, they cannot cure. Whence came this woman's pain? From fretting over the death of her son. And what availed medicines while this fretting continued? Why, then, do not doctors consider how far bodily disorders are caused or influenced by the mind? And in those cases which are utterly out of their sphere, call in the assistance of a minister, just as ministers when they find the mind disordered by the body, call in the assistance of a physician? No man can be a thorough Christian without being an experienced Christian."

In one of his essays Goldsmith adversely criticises the Methodists; and here is the second stanza of "The Three Pigeons":

"When Methodist preachers come down
 Apreaching that drinking is sinful,
I'll wager the rascals a crown
 They always preach best with a skinful.
But when you come down with your pence
 For a slice of their scurvy religion,
I'll leave it to all men of sense
 But you, my good friend, are the pigeon,
 Taraddle taraddle, taroll."

INSANE

At this particular period, accommodation for the insane was very inadequate in England. There was Bedlam, established in 1537, and a few other detention places in some of the other cities. Hundreds and hundreds of lunatics either wandered at large, a menace to other folks, or were incarcerated in jails. Many were executed as criminals or witches. About 1750 public attention was called to this shortage of accommodation, and also to the terrible condition of those insane who were incarcerated. Inmates of most of these institutions were kept in cells, starved, flogged, given emetics, bled and purged. Conditions on the Continent were bad also. Lorry (1726-1763) in 1763 gave the first impulse toward betterment by the publication of his *De Melancholia et Morbis Melancholicis*. Pinel, at the Bicêtre Hospital for Insane in Paris, initiated the movement for the correction of many abuses and the employment of scientific remedial measures. He was the first to commence the abolishment of restraint, and to render humane treatment to this

class of patient. Tuke began the work in England. Interest of several wealthy philanthropic individuals was secured, and their gifts along with a Government grant formed the beginning of a much-needed reform.

UNITED STATES

In 1756, the first course of lectures in anatomy and surgery was delivered in America, at Newport, R.I., by William Hunter, a cousin of John Hunter. The first medical school was established in 1765 in Philadelphia, by Shippen and Morgan, both students and graduates of the University of Edinburgh. They were taught by Munro, Cullen and Gregory. Morgan upon his return from Scotland in 1765, published a *Discourse upon the Institution of a Medical School in America*. Most of the educated American doctors at this period, and up to 1770, were trained in Edinburgh. The first dissection of the human body in America was performed in 1760 by Bard and Middleton.

Shippen (1738-1788) was the first professor of anatomy and surgery in this new school. He and Morgan and Rush took an active part in the Revolution, taking charge of the medical work, thus laying the foundation of surgery in America. Shippen was surgeon-general in the army and established the first medical corps.

The first American-born graduate in medicine was John Moultrie, of South Carolina.

In 1775, John Jones published his *Plain, Concise, Practical Remarks on the Treatment of Wounds and Fractures*. This was reprinted in Philadelphia with Van Swieten's *Diseases Incident to Arms and Gunshot Wounds*.

Benjamin Franklin (1706-1790) invented the bi-focal lens, the flexible catheter, treated nervous diseases with electricity; founded the Old University Hospital; and wrote on gout, smallpox, inoculation, infant mortality, sleep, deafness, and medical education.

In 1766 the physicians of Litchfield County, Connecticut, proposed to form a medical association and applied for a Charter. The General Assembly refused on the ground that such a body would form a monopoly; and that quacks and ignorant men

never administered physic without the prayers of the minister (which could not be said of educated physicians), and that no medicine can be serviceable without the blessing of God.

In Virginia, in 1736, an Act was passed regulating medical fees—five shillings for a visit within five miles, ten within ten miles. But university graduates might charge double these rates.

The New York Act, 1760, forbade any one practising in the city until they were examined by a board consisting of a Judge of the Supreme Court, the Attorney-General and the Mayor, with whomever they deemed fit to assist.

In Maryland, South Carolina, and the District of Columbia, examining and licensing were placed in the hands of the medical societies. In New Jersey the examiners were two judges.

In the Army Medical Annals of the Revolutionary War, one notes the great prevalence of scurvy through bad food. It caused a terrible havoc. One form of treatment consisted in prescribing an infusion of spruce leaves. Another consisted in burying the patient alive in a pit in the standing position, with the head only above the level of the earth, the mould being thrown loosely around him; each treatment lasted some hours, and was repeated daily until a cure was effected.

In 1775 many American soldiers suffering from scurvy overfilled the convent at Three Rivers. Promissory notes given to the nuns for payment of their care and unredeemed may still be seen at the convent.

Among the army standing orders in Quebec in 1760, we note that vinegar is prescribed for scurvy, as well as hemlock and spruce tea. Three pints of the tea daily was the dose.

Smallpox, too, was a great scourge among the Indian natives in both the British and French-American Colonies. Indeed, the struggle of the French to complete the ownership of all of America east of the Mississippi was prevented by variola. "Famine," one writer says, "is not the sole scourge. Smallpox commits ravages. It commences at Detroit. If it were desirable that it should break out and spread among our rebels, it would be fully as good as an army."

MEXICO

The medical system of Spain was established in Mexico, and included the barbers and barber surgeons. The first provision for examination was made in 1646 by appointing a Board of three persons, two of whom were to be connected with the University. From this date on to 1700, it is reported that forty-seven physicians, one surgeon, and one apothecary; along with eighteen barbers were examined and authorized to practise. The barbers did the greater part of the surgical practice. In 1742 it was ordered that no surgeon should undertake the practice of medicine, nor to give a purgative, or emetics, or diaphoretics or other drugs—that no apothecary should put up a prescription of a surgeon for such drugs—an attempt on the part of the physicians to suppress the surgeons.

In 1720 all practitioners of medicine and surgery, anatomy and algebra (bonesetting) were notified of the necessity of passing an examination. The two published in Mexico were *Historie de la Medicina de 1646-1700* by Dr. Reyes, and the *Graceta Media de Mexico*.

CANADA

The earliest physician of the English period was present at the battle of the Plains of Abraham, 1759, as surgeon's mate. He was appointed Judge of the Common Pleas when it was established in 1764 by Governor Murray. Although he knew no law at first he acquired a knowledge of the subject and remained on the Bench for thirty years. The English party in Quebec in their efforts to gain some mitigation of the Quebec Act found Mabane their sternest opponent.

Michael Sarrazin was the most famous surgeon of his day in Canada. He was steeped in the natural history of the country; was elected a member of the Academy of Science; his contributions are still found in their records. Among his associates in the Academy was Reaumur (1687-1767), inventor of the thermometer which bears his name, and Halley the Astronomer.

To return to our poet: Goldsmith died from strangury, sequel of a gouty kidney, plus an overdose of James' Powder, self-administered.

On learning of his death Edmund Burke burst into tears, and Sir Joshua Reynolds laid down his palette and brush for the day. The Harneck girls, two famous London beauties, nieces of Reynolds, whom Goldsmith accompanied to Paris, were inconsolable at the obsequies, and were only placated when the coffin was opened and they secured a lock of the dead poet's hair.

Let us close by Thackeray's incomparable tribute to this most-beloved of British authors :

"Think of him, reckless, thriftless, vain if you like—but merciful, gentle, generous, full of love and pity. He passes out of our life, and goes to render his account beyond it. Think of the poor pensioners weeping at his grave; think of the noble spirits that admired and deplored him; think of the righteous pen that wrote his epitaph—and of the wonderful and unanimous response of affection with which the world has paid back the love he gave it. His humor delighting us still; his song fresh and beautiful as when he first charmed with it; his words in all our mouths; his very weaknesses beloved and familiar—his benevolent spirit seems still to smile upon us; to do gentle kindnesses; to succor with sweet charity; to soothe, caress, forgive; to plead with the fortunate for the unhappy and the poor."

NOTE: It is scarcely necessary to confess that the writer has abstracted and extracted and condensed much from numerous authors who have written—first on Goldsmith and his work and second about his great contemporaries and their contributions to medical science.

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Oliver Goldsmith, M.D.
(Oxon.) and his medical age

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